

MATERIAL. By PAUL WATERHOUSE, M.A.Oxon. [F.]

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Forma non s' accorda.

Molte fiate alla intenzion dell' arte

Perch' a risponder la materia e sorda.—DANTE, *Paradiso*.

THE Essay which I here bring before you is written round a single word, the word *material*. "Material," in fact, is my title, but I preferred for purposes of your calendar to substitute the longer expression which appears on the card,* fearing that the one word would be misunderstood. "Material" would (who knows?) have raised an unpromising vision of Baltic timber brands and Fletton bricks; or, again, it might have engendered entirely false hopes in the direction of reinforced concrete or patent floors. I resolved, therefore, to keep back the word until I should have the opportunity of explaining what I mean by it.

I believe that some ancient thinker defined art as the *application of the infinite to the finite*. I withhold his name simply because having tried in vain to verify the authorship I am beginning to conclude that I dreamt the saying. The definition is perhaps not a very close one in the case of our own art, architecture, but it certainly suggests an interesting line of thought, and one that lies close to the argument which I ask leave to put before you this evening.

Art is Skill and Material.

I am not going to weary you with any home-made definition of art, nor even with a definition of architecture, though I am sorely tempted in this direction by finding that my last effort was just so long ago that I have forgotten the terms of my own formula; I will, however, ask you to follow me far enough into the region of truism to recall that while from one point of view every art can be analysed into the two elements of an End, and Means to that end, from another it can be described as Skill plus Material—"Mind and matter" you might say, but erroneously; for Skill, if you examine it, is sometimes both more and less than mind, and Material, as I propose to show, is in our art at least often more than matter. Skill may be partly an affair of hereditary and physical ability of a kind that is hardly mental, and may also be so closely involved in genius as to be almost above the mental sphere. It is safer, therefore, not to speak of art as mind and matter, or even as the infinite applied to the finite, but rather as Skill and Material.

You will say that I am disregarding *tools*, which are an essential part of the performance in most arts. I have not forgotten them, but I think we may set them aside in the present consideration as being, when properly viewed, really a part of the material.

* "Some Modern Conditions of our Art."

Now very possibly you think me pedantic and tedious for descending at this length into questions of definition which are abstract speculations rather than words of practical import. But I hope to show that this word-splitting business is not really without its purpose nor without its bearing on our daily life. The ever-interesting inquiry into the true nature and field of our art is not mere theory. It is a real help, if we conduct it honestly, in the problems of our craft.

In fact it is my belief that the success which crowns the efforts of some of our contemporaries and the failures which sometimes dog our best-meant endeavours are really often due respectively to knowledge and ignorance of the true scope of architecture. In other words, I believe that we sometimes err through ignorance of the nature and extent of what I am here calling by the name of "Material."

The Material of Architecture, what is it?

What is the material of architecture? The readiest answer is that the material of architecture is the same as the material of building, architecture being no more than the art of building gracefully. But to this answer I object totally. It is wrong; and the measure of its wrongness is equal to the iniquity of that inefficient definition of architecture which dubs it glorified building—making architecture, so to speak, a mere adverb of the verb "to build." If every art is truly defined as skill plus material, then obviously material covers everything we make use of outside our own natural or supernatural endowment. You see at once that I am going to include under the term more than bricks and mortar, slate and stone, wood and plaster. You will guess that I mean to throw in, to begin with, the whole office panoply, the T squares and drawing-boards, for tools of all sorts as I said just now are rightly classed as part of the material. But, indeed, I mean to go further than this. You will guess, again, that the client's money, or rather the sum of money which the client authorises the architect to spend, is also in many ways worthy to be ranked as an element in the material. And now that I have mentioned money—and money with a limitation—you will see more clearly the lengths to which I mean to take my subject. Most architects, I suppose even the most thoughtless, realise that money is in a sense the material of which they build; but not always do they recognise that the material at their disposal is not money in general, but a certain sum of money. If I mention the word "site" in the same connection, you will see that I want to suggest that the conditions and limitations of space, no less than of cost, are in themselves, as limitations, an integral part of material.

There is, as you know, a school of architects, men for the most part whose names are not the least in the kingdom of architecture, who would describe their professional and artistic obligations in some such way as this:—

"I am an artist. I have a reputation as an artist to cherish; I have also a manner or style of my own to preserve. My work must be lasting, and it must be good, and, above all, it must be essentially and inalienably mine. My brother the painter brooks no interference with his choice of colours, with his style of drawing, or with the size and shape of his work. My brother the sculptor won't be dictated to in his choice between marble and bronze, and he certainly won't put a Roman nose on to the bust of a monkey-faced man just to please the sitter."

"Architecture," he goes on to argue, "is an art of quite as high standing as painting and sculpture; its ideals are as pure, its aims as high; so that unless I stand up boldly for my own intentions whenever they clash with those of my employer I shall be not merely tarnishing my own reputation, but actually dragging down the art which I represent."

To their great honour, be it said, the exponents of this theory very often go the sacrificial length of throwing up their work rather than commit what they honestly feel to be a violation of their mission as artists. I will yield to no one in reverent respect for those who put their ideals of art before their opportunities of gain. This is nobility, even where it is quixotism.

But what I want us to ask ourselves to-night is whether the attitude of the man who thus heroically, to use the common phrase, quarrels with his bread-and-butter is always in the right from the purely artistic point of view. In fact, to bring the matter round to our subject, is it not possible that he misses the meaning of the word "Material"? Is it possible that by striving to overrule some of the conditions set before him he is in reality not vindicating or liberating his art, but really flinching from his art's opportunity? For to the artist every obstacle is not a rock of offence, but a stepping-stone.

Or, to change the metaphor, let us recall that in the hunting field the successful way of negotiating fences is not to have them removed, still less to go home in high-minded disgust.

The Relation of Architecture to other Arts. The co-ordination of our great art with painting and sculpture is a very deceptive one.

It has more than once been my task to dwell on the false analogies that are bred by this association, and I hope you will forgive me for returning to them here again. I believe that if we apply our enlarged views on the subject of material to all these arts, we shall not only brighten our vision on the interesting subject of the interrelation of the three, but maybe we shall gain a clearer knowledge of the true nature of each. It is of course true that just as brick and stone are not the whole material of the architect, so paint and canvas, clay and marble, are not respectively the whole material of the painter and the sculptor.

A child and a savage believe that the art of the painter and the sculptor consists in imitation of natural objects—a view which was largely held even by great ones among the men of old, and that even in the most cultured days of Greece and Rome.* It is a view which is to-day held, not merely by children and savages, but by vast masses of town councillors, commercial travellers, clergymen, and princes.

We know, however, that to the true philosopher of art such a view is puerile; that verisimilitude, however faithful, is not in itself art; that the presentment of nature is but a basis, so to speak, of the painter's and the sculptor's arts. In fact, if we treat these arts as we are treating architecture, we shall be ready to look on this business of imitation with which painter and sculptor are concerned as being in a sense material. It is a part of the rules of the game, one of the conditions; and as such it stands, not as the end of painting or sculpture, but as one of its preliminaries or data.

Put the matter another way. If you are going to regard building—weather-proof accommodation—as the end and essence of architecture, then you may legitimately consider imitation as the essence of the sculptor's and the painter's arts; but if not—and I think you will not—then it becomes abundantly clear that the correlation of architecture to the sister arts is a very different relation from that usually imagined, and a very much closer one; much closer for this reason that, instead of raising a barrier by saying that painting and sculpture are imitative arts, while architecture is a constructive art, you realise that, intimately as the arts are connected with the imitation and the construction respectively, the art itself is beyond them both—if not outside them, at least above them.

In deposing building from its position as the essence and crown of architecture, and in deposing imitation from the same eminence in painting, I am not making light of either. Far from it. Each is a *sine qua non*, an essential condition without which the results of the respective arts are unattainable. Indeed, it is a mere platitude to say that imitation alone is not painting, photography and the making of casts being instances of imitation which falls short of the painter's and the sculptor's arts. And of course it is equally a truism that building is not architecture.

* I do not say that the art of the ancients was simply imitation; we know that it far transcended mere representation. But the writers who allude to painting and sculpture did not, I think, recognise or talk about the higher aspects.

But my point, to get back to it, is that the artists of the other arts are just as likely to mistake the limits of material as we are, and that it is essential in all the arts to regard material as inviolable, except in certain directions.

Shall I admit that imitation and building lie so close to the artistic element in their respective arts that in the matter of technique they are indissolubly mixed? The elimination of the elements is a philosopher's business, not the craftsman's; we can only prove the distinction by realising that the imitation and the building can be done, and marvellously well done, without the art; *ergo* the art is separable from them, and they are not it.

In one sense we have brought architecture nearer to painting and sculpture by recognising that in these latter imitation lies on the side of material rather than on the immaterial or spiritual side of the craft, yet there is a wide difference between architecture and the sister arts in this very point—the extent to which it is influenced by material. A sculptor busy on a *Psyche* for a patron contends on the material side with, let us say, the properties of marble, the lighting of the room in which his figure is to stand, the necessity for making his figure anatomically like a woman, and, finally, such important trifles as the warming and lighting of his own studio, his food, his temper, and perhaps his wife's temper. All these are material, and on the other side stands skill, and involved in it that mysterious relation which a man's ego bears in the realm of thought to heaven and hell, and to the world of men and women, to poetry, to prose, and to the classical dictionary. But the list of forces on the material side is in the architect's case a longer one, and one less capable of influence, of alterations, to meet our needs.

Material slow to answer. Here perhaps I may be allowed to tell you what influence it was that made me choose "Material" as the subject of this Paper, and what has made me give to material this special sense.

Dante in a verse of the *Paradiso* speaks, by way of metaphor, of the frequency with which works of art fail of their perfection because the material will not answer—is deaf, is unresponsive. The passage set me thinking of architectural failures and of those things whose deafness, whose unwillingness to answer, contribute to those failures. Heaven knows the failure is often enough due to no outside cause. But whether it is due to impotence within or to force without, we realise in the light of Dante's suggestion that the material with which *we* are concerned, the externals with which *our* art plays and works, must be wider in range than those things which are material to the builder.

Dante's metaphor implies perhaps that in cases the deaf matter is too stubborn for the artist's call, and maims what should be their perfect offspring; but Dante would not teach a doctrine of general hopelessness. Failure there may be, and matter may be the cause; but the stumbling and fall of one and other here and there is but a challenge to others to overcome. Material may be deaf, our call should be the louder. We must take it as we find it, but we must not leave it so. Our coat may be, must be, cut according to our cloth, but we shall see, if we are artists, that it *is* a coat.

I have indeed come very near to defining material as the unalterable; but to so call it would be ridiculous, for the marble from which Michael Angelo has dragged a Madonna is certainly altered, and the clay of Buckinghamshire is magically transformed before it becomes the stately stock brick vault of the Cathedral at Westminster.

Material must be handled in accordance with its own Natural Qualities. But what I do mean, and may rightly mean, about the unalterableness of material is this, that there are at least certain properties in each of the things that I am classing as material that ought rightly to be considered as unalterable, so that that is a point at which each material says *no* to the artist. And what I am coming to by these roundabout ramblings is just this point, that the "no" which pulls us up in one avenue after another is a refusal to be respected, not

necessarily to be fought. Stone says, I won't span an opening more than so many feet wide; wood says, I won't bear a transverse strain of more than so many hundredweight; brick says, I won't keep out the weather under certain conditions; iron says, I will rust if you leave me naked; marble says, I decline to look respectable out of doors in London: all these are commonplaces of our craft in the region which we familiarly call "Material."

The refusals, the "noes," are just as emphatic and just as worthy of respect in the wider realm which in this Paper I am admitting to the title "Material," and whenever the *no* comes it is a challenge to the artist's skill, not a barrier to his aspiration. The ten yards of frontage say *no* to your attempt to build a forty-foot façade; your employer says *no* when you attempt to force on him a Palladian villa in substitution for the bungalow his soul desires; his purse says *no* when you design a ten-thousand-pound house to meet his six thousand pounds of savings.

Here you are quite at liberty to say that it is the architect's business to throw unwelcome daylight into the brain of the client who wants, so to speak, to get a quart for the price of a pint. That is true enough. One of the architect's duties is to tell his employer what money can do, and what it won't do. We are all familiar with the gentleman who has studied the *Studio*, and Mr. A's book on Country Homes, and Mr. B's book on Cottages, and Mr. C's book on Bungalows, with the result that he *knows* he can get a house with ten bedrooms, two bathrooms, a billiard-room, stables, usual offices, and three large reception-rooms for two thousand pounds. Are we, you will ask in derision, to accept this good man's desires and his means as two unalterable factors in the compound of material? Certainly not. But the right way of showing him the way out of his difficulty is surely this:—"Dear Sir," you will say to him, "I am willing to work under conditions—'it is my nature to,' as Dr. Watts says—but you have brought me for a start two irreconcilable conditions; you and I must confer and reason with each other. The sculptor couldn't make you a life-size figure out of a four-foot length of marble; the painter couldn't paint you a full-colour portrait if you deprived him of half his colours. You must decide which of your two desires is the stronger—the desire to spend only two thousand pounds, or the desire to get the accommodation you have scheduled."

A result of this conversation may possibly be a solution of the dilemma; but it may also happen that being a hot-headed pair of disputants you agree to separate. The client—client no longer—will tell you and your extravagant notions to go to Jericho, and you will tell him to go back to his handbooks on cheap houses—a course which will end in his employing and sweating a meeker architect to do the plans, while he will take credit for the designs himself. He will, moreover, inevitably face the money difficulty without the benefit of your advice and consolation.

This, of course, is the wrong result; chiefly because you have forgotten that your own hot temper and that of your client are elements in the material with which you have to deal. Instead of approaching your ungainly block of marble like a Michael Angelo, and stealing from it chip by chip a goddess or a saint, you have flung your block away. This is not art. It is simply misapplication of material.

Remember, a client with large needs and small means is quite a legitimate problem and quite worthy of solution. You cannot work a miracle, you say. But why not? A miracle is only a marvel, and a marvel is a very simple synonym for a work of art. If you cannot work miracles you may be a builder; but you are not an architect, that is, an artist.

I haven't said that you can go *all* lengths in miracle; you cannot actually and literally give your client a quart for the price of a pint—or if you do it is probably a quart of poison—

The Employer, is he too a part of Material?

The Age of Miracles.

but you can with faith, which moves other things than mountains, do the incredible, which, after all, is much the same as the impossible.

But I see that I am in danger of rather inverting or distorting my argument. My meaning in this context merely is that the providing of the largest possible house for the smallest possible figure is one of the bits of material that is well worth the artist's skill.

Purpose is Material. Purpose, again, special purpose, in a building is a quality in material which even nowadays is too often regarded as a factor which may be made to give way to supposed artistic considerations. This is terrible heresy. There are few men left who would insist on applying cusped Gothic windows to a chemical laboratory, but there are lots of architects who will stoutly maintain that the desire of shopkeepers for large areas of plate glass is a demand to be withstood tooth and nail in the sacred name of art.

There is no doubt whatever that the purpose of a building, specially one built for a scientific or technical end, is an element in material which admits of no deflection or distortion. I honestly believe that any concession made to an architect's notions of design which diminishes in any sense the efficiency of a technical building is, so far from being a tribute to art, nothing more than an admission of the artist's failure. This consideration brings us at once face to face with the question of tradition—the place occupied by tradition and precedent in the region of design.

Tradition a sad Crux. The obligation of all architects to the happy bondage of tradition is in itself part of material in our new sense of the word.

It is the plea expressed or unexpressed that he must not wander from traditional forms that most usually lands an architect in the predicament of hampering the usefulness of a technical building by concessions to design. We must be very tender with the architect here. His trouble is that material is being deaf in the most cruel degree; his case is a hard case, for his duty is heavy on both sides of the scales.

Some honest folk would say, "Don't bring an architect to bear at all on a building whose direct and utilitarian needs are quite at variance with the fancies of architecture." Indeed, some architects themselves would say, "Don't call me in to build your warehouse or your factory. I must be true to my craft, and it is not a craft that recognises the possibility of artistic work in buildings of a purely commercial or technical character. Architecture," he will go on to say, "is concerned with buildings which for one reason or another have a character which elevates them above the bare necessities of economic housing; it is further bound up with certain traditions which have nothing whatever in common with prosaic and modern utilitarianism. If a building is of such a kind that the fulfilment of its structural necessities is at variance with preconceived notions of style, in such matters as roof form, window sizes, and the like, it is better left quite frankly to those constructors who are not burdened with obligations towards the honourable traditions of architectural form."

But I ask you, Can such an argument possibly be right or sound?

Deus ex Machina. There was a rule among the playwrights of Greece and Rome respecting the introduction into their dramas of the supernatural. The difficulties of dramatic composition being in those days perhaps as acute as they are now, inferior writers were apt to make an undue use of the device of divine intervention. The entrance of a god upon the stage which would ennoble a drama already noble, if used as a mere subterfuge by the incapable author to help his muddled characters out of a situation into which his own incompetence had driven them, brought discredit alike on the dignity of the drama and the honour of the gods. Therefore said Horace in his rules for poets, Don't introduce a god into your play unless you have a problem worthy of his unravelling.

Is it in the spirit of Horace, and with the airs of Olympus, that an architect holds back

from such tasks as we have been discussing? If so, I think the architect may step down from his godhead—or, better still, let him realise, as he surely may, that, so long as the building that cries out for his help is honourable in its purpose, it comes within Horace's definition of a knot worthy of a god's untying.

Dignus vindice nodus. Be it never so strange in its character, so new in its needs, or so revolutionary in its appeal against traditional form, it is impossible to conceive of any building the designing of which is beneath the dignity of an accomplished architect's skill. It may present by its problem a material which is unusually deaf; but the prince among architects is he who will call from that deafness an answer, not he who meets the deafness with dumbness.

By this time I think I hear someone whose patience is nearly exhausted say, "This view of yours about material, this grouping under the name of material, not only all the physical products with which building is effected, but also half at least of the operations in which the architect displays his talent, is a ridiculous whittling down of the sphere of the art itself. You have defined architecture by elimination, and have left but an invisible needle point as the residuum."

I think I will answer this first by an illustration. There is a story in the autobiography of Berlioz which relates that when he was wandering, apparently without purpose, on the shores of the Mediterranean he was arrested as a suspicious person and subjected to a police-court trial. "What was he doing?" said his tormentors. "Composing," said the composer. At that they laughed aloud, and with an air of conviction reminded him that musical composition was not to be accomplished without the aid of a grand piano.

I was going to say that good planning though an essential element in good architecture was one of the things that have to be set down on the material side; the remembrance of this story assures me that I may almost go further still.

All the outward and drawing-board manifestations of the design as well as all the manifestation in wood and stone are *grand piano*, in other words are material. The art, the architecture, is an inner thing which the architect may bear about with him on the sea shore, and run therewith the same risks as Berlioz. Happily a drawing-board as a badge of sanity is more easily carried than a pianoforte. Shall we, then, merely carry drawing-boards because there are fools about who may misunderstand our motives if we show no other evidence of occupation than a hand pressed to a heated brow? Heaven forbid! The drawing-board lies closer to the brain than that. In fact you will spring out at me with the observation that the parallel to the drawing-board in the musician's realm is not the grand piano at all, but the sheet of ruled music paper. And you are quite right. The fact of course is that the parallel must not be pressed too far; its value really lies in this, that just as the musician can do the deepest and highest part of his work without making any such outward demonstration of it as is visible or audible to the police, so most architects will acknowledge that many of their toughest problems have found their solution, not through the point of a pencil, but in pure brain exercise carried out in bed perhaps or by the aid of a pipe at the fireside.

This talk about music reminds me of another point which will help our argument. The mistake made by the *gendarmérie* in the case of Berlioz was not merely a misunderstanding of the method of musical composition, but a subtler and commoner mistake; the confusion of one art with another. There are in the kingdom of music, two arts—perhaps more—the art of the composer and the art of the executant; and if you come to think of it these arts differ in the scope of their material, a reflection which at least suggests the possibility that the difference between one art and another is largely the difference between their materials. At all events we discover what Aristotle discovered long ago, that every art of any consequence

has subsidiary arts attached to it. I am not sure whether we ought not rightly to reserve the term "art" for the sovereign or primary arts, finding some other title for the less or ancillary crafts.

**An Art often
confused with an
Allied Art.**

In music, for instance, there is a clear line to be drawn between the creative art of the composer and the interpretative skill of the conductor and the orchestra. But it was, as we saw, a confusion between the composer's art and the performer's which led to Berlioz's arrest, and the same confusion leads to trouble in the other arts.

The people who find art in a picture which is merely a realistic representation of a natural object, whether it be a slice of salmon or a race-horse, are making the mistake of the prosecutors of Berlioz, and similarly those who think a man a good architect merely because he is a good constructor make the very same mistake. And it is my belief that we can reduce these mistakes to misapprehension of material. I will not stay to discuss now why it is that the man who can imitate salmon-slices and race-horses in paint is not thereby entitled to the name of artist, whereas the musical conductor, the singer, and the violinist are or may be; but it is clearly demonstrable that what is the goal of a subsidiary artist or craftsman becomes in turn material to his higher brother. In music indeed the interpretative craftsmen are themselves the material of the conductor, and he in turn is the material, or a part of the material, of the composer.

In painting there is no such despotism of the master painter over craftsmen, but still that imitation of nature which is to the salmon-and-racehorse man the acme of skill becomes to the real artist material; and the architect we see once more vindicates his claim to kinship with the musician by having among his material, not merely the full craft of the constructor, but a whole army of constructive beings, general contractors, tradesmen, labourers, and even artists of sublimest art.

Recapitulation.

Perhaps I may now pull these roving thoughts together with a brief rehearsal of the argument in other language. I think I might sum the matter up thus: All arts may reasonably be analysed into the two elements of Material and Skill. The justice of such an analysis is obvious; and if once this division is admitted it becomes clear that all which is not skill in any given art is a part of the material. In fact even the merely physical part of the skill seems almost to fall on to the material side of the balance. In any case it emerges as fact that in most of the arts the realm of material is a much wider one than is generally supposed, and that in our own art, the art of architecture, the word "Material" may legitimately cover a surprisingly large field. To assume that the material of the architect is the same as that of the builder is to misunderstand altogether the range of the artist's opportunity. Material means in any art the whole army of externals with which the brain of the artist has to contend, his obstacles, if you care to call them so—in other words, his means of expression. This question is not one of merely artificial or academic importance. The necessity of appreciating the true limits of material in architecture as in other arts lies in this, that the craftsman has to take material as he finds it. He has indeed to transform it—it is this transformation or metamorphosis which is the very act of art—but in the beginning his business is to take it as it comes, and to treat it *according to the laws of its own nature*. If, then, the architect once realises that material for him includes not merely bricks and mortar, but such things as the shape and value of a site, the employer's needs, the employer's means, and all the other legitimate conditions of his problem, including before all things the practical purposes of his building, he finds his mind relieved of certain scruples which sometimes assail an architect's conscience, or, in the absence of a conscience, his pride. His responsibility as regards material in this large sense is restricted first to making sure that the

material is worthy, and honest, and next to being certain that he (the architect) is making the very best use of it.

There are certain conditions of architectural design which are often (and wrongly) looked upon as controllable by the architect; there are certain others which are often (equally wrongly) considered prohibitive of architectural treatment. But if both these classes of conditions are relegated, as they certainly should be, to the department of material, we should on the one hand put a check on many architectural extravagances which arise from a misguided departure from legitimate and authoritative conditions, and on the other architects would be encouraged to persevere in handling certain problems which nowadays too often run the risk of being considered beneath an architect's notice.

It is quite easy at this point to put a false meaning on my suggestion. You might accuse me of recommending architects to go and do what they are told by their clients without disputing the conditions set before them. But, indeed, my argument carries with it no such conclusion. My intention in classing the client—I prefer, by the way, to call him the employer—among the material is not that the architect should, so to speak, swallow him whole (for that is not the legitimate use of architectural material), but rather that the architect should deal with him at least as reasonably as he does with the other means at his disposal.

An architect is an adviser, like a medical man, and one of his duties is diagnosis—diagnosis of the employer's needs—which may not necessarily be identical with the words in which he first expresses them; and the architect who carries out unreasonable orders without question is guilty of a double misuse of material. He has probably misused his employer's money; he has certainly misused his own talent.

Last week my eye fell upon a strange story from a book on Persia, which is a ludicrous comment on the relation of architects to their employers on the one hand, and to material on the other.

A king of Persia, in days gone by, was a mighty hunter. One day with many friends he made an unusually large bag of big game. The day of sport was followed by a day of feasting, during which an attempt was made to consume the entire proceeds of the slaughter. This was unlike a modern sportsman, but the king showed the modern spirit in a desire to keep the heads as trophies. No hall or staircase could have accommodated them, so he sent for an architect, of all people, and ordered him to make the heads into a neat pyramid. After a while the architect returned, smiling, to the monarch to report progress. "Have you finished?" said the king. "Not quite, sire," said the architect; "I still need the head of some conspicuous beast to crown the whole." "Conspicuous beast!" said the king, who loved a jest, "your own head shall be honoured." So they cut off the architect's head and, to the satisfaction of all the company, planted it on the top. According to some accounts the heap of skulls may still be found in Ispahan surmounted by what is evidently the skull of an architect.

Even this ridiculous tale has a moral. What you and I should have done would have been, no doubt, to take instructions attentively; but noticing that the king was in a state of unreasonable excitement, and not fit to give orders, we should have gained time by promising to call again in the morning with a $\frac{1}{4}$ -inch scale elevation of the proposed pyramid. Considering the period in which the event occurred, I am afraid that the poor fellow deserved what he got. Nowadays the punishment is less humorous and less severe, but it is still possible for architects to do things just as silly as building up a bleeding pyramid of dead heads. A foolish order should not be capped by a foolish performance, or in the end one fool may off with the other fool's head. On the other hand, I hold that nothing can excuse the setting aside by an architect of conditions relating to cost and requirements, provided that

such conditions are reasonable. Nothing can justify an architect in believing that a problem in design is unworthy of his attention because either of its simplicity or of its special or technical character. New needs and strange needs, large ambitions and small means, these present difficulties, no doubt, and obstacles; but obstacles are in art's vocabulary only synonyms for opportunities. The tough marble waiting to be hewn into a Venus is but a parallel to the obstinate material of the other arts. For artists there are no real impossibilities even among the acute difficulties of modern civilisation. Tradition, our great mistress, may sometimes seem irreconcilable with technical or commercial needs; but all that is needed in the hardest case is a miracle, and a miracle is only another name for a work of art.

REVIEWS.

TUDOR HOUSES.

The Domestic Architecture of England during the Tudor Period. Illustrated in a series of Photographs and Measured Drawings of Country Mansions, Manor Houses and smaller buildings, accompanied by an Historical Descriptive Text, including a large number of Plans and Details. By Thomas Garner and Arthur Stratton. To be completed in Three Parts. Part I. F.o. Lond. 1908, price 2l. 2s. [B. T. Batsford, 94 High Holborn, W.C.]

This is one of those sumptuous and charming books for which Mr. Batsford has become famous during the last ten or twelve years. It takes up the story of English domestic architecture some hundred years before the period dealt with in *The Architecture of the Renaissance in England*, and, when completed, it will show not only the work of Tudor times, but also how the purely English tradition was affected by foreign influence, and will link up the work of Henry VII.'s time with that of Elizabeth.

The captious critic might conceivably object that the scope of the book is at variance with its title; and indeed even the little piece of special pleading in the Introduction hardly reconciles us to the application, in an architectural sense, of the term Tudor to Elizabethan and Jacobean buildings, as well as to those of the time of Henry VII. and Henry VIII. Surely the need in architectural nomenclature is to find means of differentiating phases of style rather than of confounding them.

But when this grumble is over there is nothing further of importance to cavil at, and it is a continual pleasure to turn over the pages of the text and the splendid illustrations. The introduction is a scholarly piece of work, not merely of architectural but of general interest, treating the change of style not from a narrow, technical point of view, but from a broad, historical standpoint. The descriptions of the various plates give a succinct account of the buildings illustrated, with enough of their history to enable the reader to place them

in their proper sequence in the story of architectural development; and if they sometimes leave him with a few points unexplained, he must remember that nothing short of a lengthy monograph could do all that he would desire in this respect.

We all know in a general way how rich England is in fine examples of domestic architecture, but a book like this brings the fact more vividly before us, particularly by the help of the large and excellent photographs, which enable anyone armed with a magnifying-glass to grasp the minutest detail of moulding or carving. The Tudor period seems to be as rich in examples as the Elizabethan or the later phases of the Renaissance, and the thanks of the public are due to the authors and publishers for bringing to our knowledge, in so complete a manner, buildings of which we have heard from time to time, but which it is the lot of few to be able to visit. The late Mr. Garner had made a special study of this phase of English work, and after his death it was not easy to find anyone competent to take up the task where he left it; but in Mr. Stratton the right man was found—a skilful draughtsman, with a knowledge of his subject, and enthusiasm in setting it forth.

The first thing about the houses here illustrated that strikes the student of domestic architecture is that they were built for pleasure rather than for defence. The days of jealously guarded entrances and of small windows were passing away. They had not yet quite ceased, however, and as a rule the windows are small compared with those of a century later. But where they are in safe positions, or where they light important rooms, no great restriction was placed upon their extent, and, especially in bay-windows, they afford many charming and not a few magnificent examples. Such are the grand range of windows at Forde Abbey (Plate x.) or the bay-windows at South Petherton (Plate xii.), Thornbury Castle (Plates xxvii., xxviii.), Horham Hall (Plate xxix.), Hengrave Hall (Plate lvi.), and the three examples on Plate cxlv. Not only were the rooms thus made cheerful, but they were often

elaborately decorated, both as to the walls and the ceilings. The former were panelled, largely with the linen pattern, and later with work in which there was a considerable infusion of the Italian influence. A fine example of both these types is to be seen at Thame Park (Plate xxvi.). Incidentally it may be doubted whether the statement on page 54 that the "spur" doorway (of which there is an example at Thame Park) owed its origin to Tudor times, can be substantiated, inasmuch as frequent references are made in the *Liberate Rolls* of the time of Henry III. to some kind of inner porch, which was variously denominated the "sporam," "sporum," "sperum," and "esperum."

The ceilings of Early Tudor times were formed of heavy moulded beams carrying others of lighter scantling; later they were flat with rectangular panels formed by moulded ribs of wood, and later still, according to our author, of plaster ribs; but the date of the first plaster ribs has yet to be definitely fixed, and it is very doubtful whether the date will be found in Henry VII.'s reign, or indeed much before the middle of Henry VIII.'s. Perhaps in the succeeding parts of the book Mr. Stratton may be able to throw light upon this interesting point.

One or two other matters may be mentioned as being debatable. It is suggested that the Tower at Cothele was placed where it is for the sake of the view. It is doubtful how far a "view"—that is, the pleasure of looking at beautiful scenery—affected the disposition of any house before the middle of the eighteenth century. The term "withdrawing room" is applied to the family room adjoining the great hall in several early examples. Is there any authority for the use of this term before Elizabeth's time? Would not "parlour" be more correct?

These, however, are trifles, and do not detract from the value of the book. Mention must be made of the plans of houses, which show the stage of development at which dwellings had by this time arrived—considerably in advance of their predecessors, but neither so commodious nor so ingeniously planned as those of the end of the sixteenth century. The measured details are excellent, admirably drawn, and carefully executed, in spite of a slip on Plate xxiv. (detail at A), where two dimensions, obviously different, are figured alike. The photographic details are also excellent, and do full justice to the vigour of the subjects, notably on Plate cxxxix., which exhibits bits of heraldic modelling as fine as anything to be found in England. If the remaining parts of the book maintain the high level of the first, it will form one of the most valuable additions to an architectural library which have appeared in recent years.

J. A. GORCH [F.].

Kettering.

ENGLISH VILLAGES.

The Charm of the English Village. By P. H. Ditchfield, M.A. Illustrated by Sydney R. Jones. 8s. Lond. 1908. Price 7s. 6d. net. [B. T. Batsford, 94 High Holborn, E.C.]

"Of all situations for a constant residence, that which appears to me most delightful is a little village far in the country." So wrote Miss Mitford; and although so remote a place of residence may not be equally delightful to everyone, and some, indeed, may find themselves more in agreement with the Italian person of quality, who said: "Had I but plenty of money, money enough and to spare, The house for me, no doubt, were a house in the city square," yet no one can be altogether insensible to the beauty of our English country-side and the charm of its numberless scattered villages.

The charm of these villages increases with one's knowledge of them, and for the benefit of those whose knowledge is limited Mr. Ditchfield has written his latest book. In it he shows how much the village owes to the geological formation upon which it stands, and how dependent its appearance is upon the quality of the local building stone. Thus a village in a granite district differs in many ways from one in a locality in which is found a free-working limestone; and both these, again, are markedly different from one where building stone is unobtainable, but where timber is plentiful. This endless variety of our villages is one great cause of their charm; another is their permanence. Who can tell the age of a village? When, why, by whom was it founded? Who gave it its name? Who laid out the road upon which it stands? Such questions are easy to ask, but the answers to them are lost in the dim twilight of the dawn of history in this island. Since that far-off time numberless generations have come and gone, but the village remains; not, of course, altogether without change, but with surprisingly little. The road through it may still follow the line of the one which the Roman engineers made—or, perhaps, more correctly, re-made—at the time of the Roman occupation. The mill which the Conqueror's surveyors noted when they were making the returns for the *Domesday Book* may still, perhaps, be found, although no longer continuing its life of usefulness. And the church tower may have been a familiar object to the neighbourhood since the twelfth century. "The old tower of the village church," writes Mr. Ditchfield, "seems to say, *'Je suis, je reste.* All things change but I.'" Why the church tower should be made to speak in ungrammatical English, however, or why it should misquote MacMahon's historic phrase, is not evident.

And then when one comes to take a village in



ABBOTS MORTON, WORCESTERSHIRE.
(From *The Charm of the English Village*.)

detail what a wealth of interest and charm there is in its several parts—in its church, its manor-house, its cottages with their clipped hedges and gardens full of flowers, its shops, its inns, its grammar school, its almshouses, its green, its bridge, and so on! Upon all these Mr. Ditchfield has much to say, as well as upon such lesser matters as sundials and weathercocks, pillories, ducking-stools and whipping-posts, wayside and other crosses, barns and dovecotes; and everything he says is interesting.

The illustrations, of which there are no less than 120, form a most important feature of the book, and deserve a special word of praise. These are all by Mr. Sydney R. Jones, who has a remarkably wide and intimate knowledge of our English villages, and who is well able to portray their many charms. The character of his work may be well judged from the examples which, by the kindness of Mr. B. T. Batsford, the publisher, are here reproduced.

Erdington.

BENJAMIN WALKER [*A.*].



COTTAGES AT WINSON, GLOUCESTERSHIRE (COLN VALLEY).
(From *The Charm of the English Village.*)

A FEW DAYS IN FRANCE.

By J. D. CRACE [*H.A.*].

LE PETIT ANDELY AND THE CHÂTEAU GAILLARD

ROUEN, Chartres, Le Mans—all familiar names to architects, but as fields of study inexhaustible, for do they not include the noblest triumphs of Gothic architecture? Do they not also contain perhaps the finest stained glass in Europe, unsurpassable in beauty and of amazing extent?

The halt of a few hours at Rouen was, on this occasion, chiefly devoted to St. Ouen. Well known as it is, at each visit this noble church seems to impress one more. The simplicity of the vertical lines which aid and express the great height—that quality, perhaps, which first holds the attention—the lace-like effect produced by the light admitted through grisaille glass and through the double tracery of the triforium, and the further lighting of the great windows of the clerestory, all help to annihilate sense of weight; it seems a natural growth rather than a construction. It is to be noticed, too, how important a part the stained glass plays in the general effect. Apart from the charm of the colour it has a sort of constructive function, for by averting the abrupt contrast of structure and daylight the whole seems connected and continuous, where white glass would have left the stonework detached and thin. The

perspective is finely closed by the three long windows of the apse, with their "rose" heads, the glass in which, although partly of assorted fragments, is singularly effective in relation to the whole.

St. Ouen is a fine introduction to the grander churches of Northern France.

It was on the morning of Palm Sunday and under a doubtful sky that we passed through the great west portal of Chartres, between those columnar archaic figures which, with their air of dreamy mystery, seem to have evolved themselves from the stone. From the wan gleam of sunshine of the chill spring morning we suddenly find ourselves in what seems like darkness for the first few moments—a warm darkness with lustre of jewels here and there—and as the eye adjusts itself to the contrast we recognise the great piers of the nave and a black mass of worshippers filling the floor-space. Gradually we are aware of the forms of the windows breaking the rich gloom. But what windows! It is not the chill daylight that they admit, but a glorious harmony of deep and luminous colour, which seems to transform everything; temple, columns, worshippers no longer are part of the cold outer world. I cannot imagine a

man so callous as not to be affected by this marvellous transmutation.

A broken pane here and there seems only to give added brilliancy to the colours. A group of lighted candles in a side chapel give bright points of yellow light, and just reveal in warm tones a great column and intersecting curves of vaulting ribs above; below, always the black groups of kneeling forms. I think no one can realise what a cathedral may be until he has seen Chartres, or such another

(if there be another), with its windows entirely filled with the finest stained glass. This is almost all of the thirteenth century, and includes not only the small groups of figures within geometrical forms, as at Canterbury or Amiens, but grand single figures of more than life size in the clerestory lights and transepts, and traceried rose windows of unequalled beauty and size. Stained glass in detail can probably be studied as well, or better, elsewhere. Nowhere can the magnificent completion of result be seen as at Chartres; for the building is worthy of it, and it is everywhere. Only from a few windows of the choir has it been removed, alas! the better to light an eighteenth-century deformity; but both the latter and the windows in question are unseen in the great perspective.

But, after all, the glass is but one of the perfections of this noble pile. Such a work could only be possible to a great wave of religious enthusiasm, as was indeed here the case. Artistic labour has been lavished wherever room could be found, often where it must remain unrecognised. Yet nowhere have the grand lines of the building been disturbed. The devoted labour has to be sought for. From the twelfth century to even the end of the fifteenth century sculpture, the finest of its time, has been executed in and about this building, mere fragments of which would be treasures. I shall have to revert

to the earlier work, but of the later I may point to the exquisitely carved pilasters outside the enclosing screen of the choir, some of which cannot be surpassed in Italy.

Returning to the exterior, I think it will be admitted that the spire of the north-west tower—the one of open tracery—is rightly judged by Fergusson the most beautiful of its kind in Europe. The wonderful detail never disturbs the poise and fine proportion. It has an effect of "spontaneity"

in which I think it excels Antwerp, Vienna, or Strasburg. When we return to the three great entrances—the west, north, and south—we find the interest grow with each examination. It seems little short of marvellous that they remain so slightly injured through all the stormy periods of their existence. In the west front we have those sculptures of the twelfth century, with their conventional forms and rich archaic details, still capable of affecting the mind of the spectator with an influence by no means purely archaeological; but, from the latter point of view, one must be struck with a certain similarity of treatment in these figures and the archaic Greek. The straight folds of the draperies, with occasional expression of articular action, are extremely similar. This is also noticeable with the advance of art. In the north



STATUES IN THE SOUTH PORCH, LE MANS CATHEDRAL.

porch (thirteenth century) there is still a similarity of progress which seems to follow on much the same lines. A little more freedom, a closer observance of nature with a studied simplicity. But the finer sculpture of France in the thirteenth century has often reminded me of Early Greek work. I may instance the porch at Le Mans and the musician angels of Strasburg interior.

One cannot pass by the figures of these great doorways without noticing how unusual in detail are the pedestal columns which carry them. Those of the west front resemble rather Lombardic work,

while the curious "baluster" forms of those of the north porch remind one at first sight of the forms and elaboration of the Certosa. It is only on closer inspection of the detail that it becomes evident that they are really a part of the original work of the thirteenth century. There are small figures in the vault of this porch some of which are worthy of Peter Visscher. But this is not the place for criticism in detail. A world of sacred history and tradition is illustrated by innumerable figures and groups in these porches and in the stained glass. Besides an extensive hagiology* are to be found most interesting illustrations of many trades and crafts of the guilds by whom the windows themselves were presented.

Pre-eminent as is the cathedral, it is by no means the only storehouse of magnificent glass in Chartres. The Church of St. Pierre in the lower part of the old town, to the south-east—in itself a fine church—is, for its size, almost equally full of magnificent stained glass of somewhat later date. Nowhere can be seen a more brilliant effect of early fourteenth century glass than in the five great windows of the apse, and again in the large clerestory windows occur life-size figures of saints and prophets superb in colour. In these windows the curious expedient is used of alternating (vertically) coloured lights or panels of those figures and lights of grisaille with borders of colour. In perspective the effect is good, but I do not think this treatment a satisfactory one. The church is chiefly of

* A curious example of the naïve and literal rendering of allegorical idea occurs in the south transept windows, where the four Evangelists are represented (riding pick-a-back) on the shoulders of prophets—St. Luke on Jeremiah, St. Matthew on Isaiah, St. John on Ezekiel, St. Mark on Daniel.

the thirteenth and fourteenth centuries, and it is here that are the remarkable enamels of Léonard Limousin—single figures of the Apostles on white grounds.

The river-side in the same region presents many picturesque features, including one of the old town gates. Half-way down the steep side of the town, in the building now used as the "Crèche Communal," is the outer shell of a fine old timber-work outside staircase, probably of the early sixteenth century.

From Chartres one reaches Le Mans in about two hours. The two towns themselves, although occupying very similar sites, present a sharp contrast in general appearance. Chartres has the somewhat faded air of having seen better days. Le Mans, on the contrary, strikes one as being now in the very height of prosperity. New municipal buildings, post-office, banks, residences, all on a handsome scale, are much in evidence. The ancient church of Notre Dame de la Couture is the only bit of antiquity seen on arriving, and that is fenced by a gilt modern railing. It is near the river and near the cathedral that the remains of the past are to be found. But the town is much changed since I first saw it forty years ago.

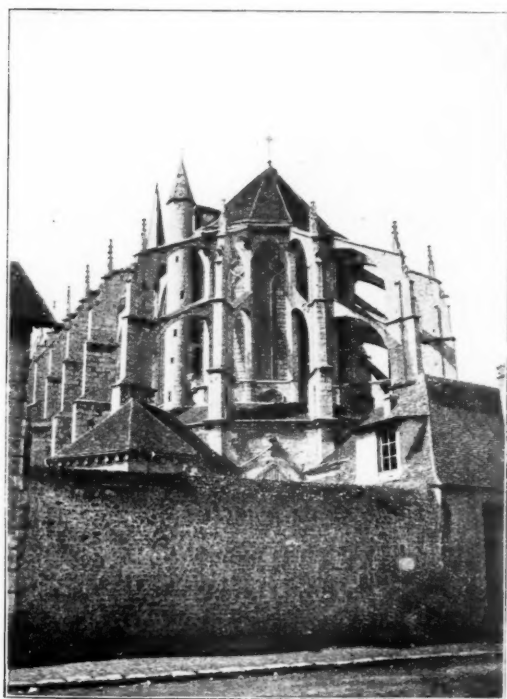
The most striking external characteristics of the cathedral are its vast flying-buttresses and its great clerestory windows with their geometrical tracery, and it is precisely these features which are first seen on approaching it from the centre of the town. Practically there is but one approach for the stranger, and that from the south-east, with a large open space in front, from which an ornamental flight of steps ascends to the cathedral, the buttresses and chapels of the apse forming the conspicuous feature. Seen, as I first saw it long ago, by the full moon on a summer night, it is unforgettable. Within the building the most



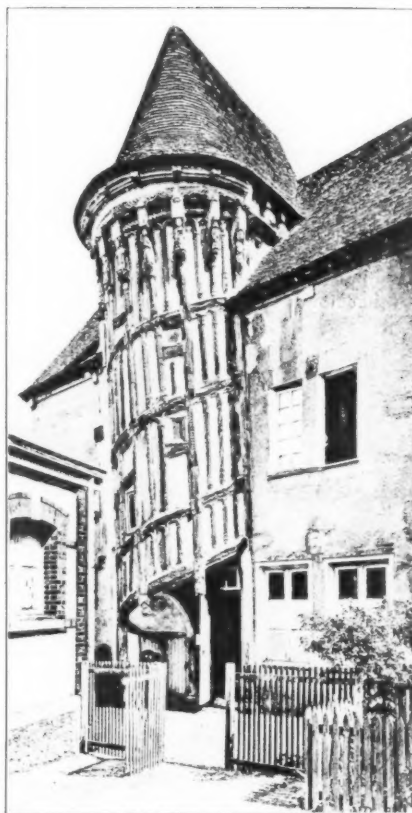
FROM NORTH PORCH, CHARTRES.

impressive thing, at first sight, is the greatly increased height of the choir, with the magnificent glass of its windows. Their fine tracery and the beautiful triforium may share admiration. In the transept the cusping of the triforium arcade has been so worked as to form a fleur-de-lys.

But it was now the latter part of Holy Week. Services were continuous; the great church was full of worshippers; and it was not a time for the noting of details. Yet, even to one coming from Chartres, the Cathedral of Le Mans is an impressive and noble church, and worth a pilgrimage. West of the cathedral and behind a row of houses, the ground falls sharply to the river. On this steep bank stood the old castle, of which nothing remains but a fragment of wall here and there; but portions of the old fortified walls of the town are to be seen further south, near the river, with some bits of Roman work. On a level with the cathedral, and almost opposite the south door, is the old Grande Rue with many old house-fronts. Here is the so-called "House of Berengaria," an interesting building, of perhaps the fifteenth century, now in private hands and a good deal restored, but with much of the original. It contains an interesting museum of antiquities of all kinds—



SAINT-PIERRE, CHARTRES.



STAIRCASE, CHARTRES.

furniture, armour, ironwork, &c.—well worth a visit.

On leaving Le Mans we made our way back, through Paris, to Les Andelys and the "Château Gaillard." The Church of Le Petit Andely, though small compared with those already mentioned, is a fine church, with a singularly short nave. It has some good glass of a later period.

Thence we made for Caudebec en Caux, full of quaint houses, and with its beautiful church and spire, well known to us already. It is another notable example of the lavishness and finish of French architectural detail. The exquisite labour on a church in this small town seems incredible. The windows are filled with rich glass of the sixteenth century, comparable in some ways with the Fairford glass, but generally finer in drawing and detail. The clerestory windows are of white or grisaille glass with coloured borders and large roundels.

The apse is remarkable as having one angle and

column in the centre, so that it terminates in an angle, instead of one face, of a hexagon. The triple-crowned spire is the chief glory of Caudebec, and may well be so; for, indeed, we have nothing in England to compare with this beautiful church.

Yes, we must allow that the noblest and richest forms of Gothic art are to be found in France, and the most devoted labour.

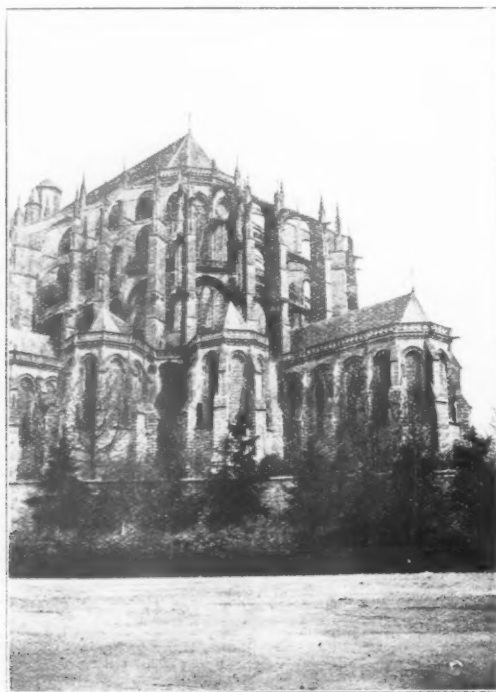
We can only stand grateful and astonished that incessant wars and great tempests of human passion and destructive madness have left us so much of the exquisite art and labour of bygone generations of skilful and devoted men. These noble piles that now look down on us with a serene calm,

temples which represent and richly illustrate the Christian faith, have looked down on what horrors of war and cruelty and bloodshed, on what grief, what despair! Can the same race of men raise such fabrics for the religion of peace and do such deeds in its despite?*

Well might the Psalmist exclaim, "Lord, what is man that Thou art mindful of him?"

Easter 1908.

* In 1793 some 10,000 men, women, and children were massacred in the streets of Le Mans—5,000 in one small "Place."



LE MANS CATHEDRAL.

REPORT ON DRY-ROT.*

By PAUL OGDEN [F.].

Short Definition of Dry-rot.

1. Authorities generally assert that dry-rot is a state of decomposition of timber induced by dry-rot fungi, the commonest, most destructive, and best known of which is *Merulius lachrymans*.

2. It is a remarkable fact, and well known, that *Merulius lachrymans* is a domestic fungus peculiar to dwelling-houses and other buildings, and not found in the forest.†

3. Professor Hartig, who has devoted much time to the investigation of "dry-rot," has shown that this particular kind of red or brown streaking is due to the ravages of *Polyporus vaporarius*. The mycelium of this fungus destroys the structure of the wood in a manner so similar to that of the *Merulius* that the sawyers and others do not readily distinguish between the two. The mycelium of *Polyporus vaporarius* forms thick ribbons and strands, but they are snowy-white, and not grey like those of *Merulius lachrymans*; the structure, &c., of the fructification are also different.‡

4. Now *Polyporus vaporarius* is common in the forests, and it has been found that its spores may lodge in cracks in the barked logs of timber lying on the ground.§

5. The suspicion may well gain ground that this important subject has by no means been exhausted.

Favourable Conditions to the Generation of Dry-rot.

6. The peculiarity in the case of the spores of *Merulius lachrymans* was found by Hartig to be the necessity of the presence of an alkali, such as ammonia; and it is found that in cellars, stables, and other outhouses where ammoniacal or alkaline emanations from the soil or decomposing organic

matter can reach the timber there is a particularly favourable circumstance afforded for the germination of the spores. The other conditions are provided by a warm, still, damp atmosphere, such as exists in badly ventilated cellars and corners, and beneath the flooring of many buildings.*

7. A large series of comparative experiments, made especially by Hartig, have fully established the correctness of the conclusion that damp foundations, walls, &c., encourage the spread of dry-rot quite independently of the quality of the timber. This is important, because it has long been supposed that timber felled in summer was more prone to dry-rot than timber felled in winter; such, however, is not shown to be the case, for under the same conditions both summer and winter wood suffer alike, and decrease in weight to the same extent during the progress of the disease.†

8. The dark stagnant air in cellars and under the boarded floors of the ground story is very congenial to fungus growth.‡

9. Linoleum or kamptulicon on floors is also objectionable; and, indeed, whenever a floor has been washed and scrubbed it should be thoroughly dried before any covering whatever is laid down.§

10. The positions in which dry-rot occurs are those where the timber is exposed to warmth and damp stagnant air.

The principal parts of buildings in which it is found are:—

In warm cellars, under unventilated wooden floors, or in basements, particularly in kitchens or rooms where there are constant fires. "All kinds of stoves are sure to increase the disease if moisture be present."

The ends of timbers built into walls are nearly sure to be affected by dry-rot unless they are protected by iron shoes, lead, or zinc. The same result is produced by fixing joinery and other woodwork to walls before they are dry.

Oilcloth, kamptulicon, and other impervious floorcloths, by preventing access of air and retaining dampness, cause decay in the boards they cover. Carpets do the same to a certain extent.

Painting or tarring cut or unseasoned timber has the same effect.

Sometimes the roots of large trees near a house penetrate below the floors and cause dry-rot.||

* These extracts have been kindly prepared for publication by Mr. George Hubbard, F.S.A. [F.], who with the President and Mr. Paul Ogden [F.] were cited as witnesses in the recent dry-rot case at Manchester—*David Lewis Trust and Levy v. Graham*. Mr. Ogden prepared a voluminous report dealing with the case, and embodied in it a digest of the whole subject of dry-rot. The best authorities have been consulted by Mr. Ogden, and the extracts, with their references, should form a valuable addition to the literature of the practising architect. The possibilities of dry-rot appearing in any building is a standing menace, and the subject is therefore one of particular interest to the profession. Mr. Ogden's gleanings have been set out in such a concise and clear form that it is felt that no better method could be adopted than to quote directly from his report.

† H. Marshall Ward, *Timber and Some of its Diseases*, p. 193, lines 6-9.

‡ *Ibid.* last paragraph, p. 193, to line 2, p. 195.

§ *Ibid.* p. 195, lines 7-10.

|| *Ibid.* p. 198, last three lines.

* H. Marshall Ward, *Timber and Some of its Diseases*, p. 184, lines 7-18.

† *Ibid.* last paragraph, p. 185, to line 2, p. 186.

‡ W. H. Bidlake, *Dry-rot in Timber*: first two lines of last paragraph on p. 17.

§ *Ibid.* p. 17.

|| Rivington, *Notes on Building Construction*, vol. iii.: last four paragraphs on p. 392, and first three paragraphs on p. 393.

11. There is this particular danger about the dry-rot—viz. that the germs of the fungi producing it are carried easily, and in all directions, in a building where it once displays itself without necessity for actual contact between the affected and the sound wood.*

General.

12. Thoroughly dry timber, so long as it is kept thoroughly dry, is proof against the disease we are considering. Nay, more, the fungus is peculiarly susceptible to drought, and the mycelial threads and even the young fructifications growing on the surface of a beam of timber in a damp close situation may be readily killed in a day or two by letting in thoroughly dry air; of course the mycelium deeper down in the wood is not so easily and quickly destroyed, since not only is it more protected, but the mycelial strands are able to transport moisture from a distance. Much misunderstanding prevails as to the meaning of "dry air" and "dry wood"; as a matter of fact, the air usually contains much moisture, especially in cellars and quiet corners devoid of draughts, such as *Merulius* delights in, and we have already seen how dry timber rapidly absorbs moisture from such air. Moreover, the strands of mycelium may extend into damp soil, foundations, brickwork, &c.; in such cases they convey moisture to parts growing in apparently dry situations.†

13. The best knowledge to hand seems to be that no difference is observable in the susceptibility to dry-rot of winter wood and summer wood of the same timber—i.e. *Merulius lacrymans* will attack both equally if other conditions are the same. But air-dry and thoroughly seasoned timber is much less easily attacked than damp fresh-cut wood of the same kind, both being exposed to the same conditions.

Moreover, different timbers are attacked and destroyed in different degrees. The heart-wood of the pine is more resistant than any spruce timber. Experimental observations are wanted on the comparative resistance of oak, beech, and other timbers, and, indeed, the whole of this part of the question is well worth further investigation.‡

14. It must first be borne in mind that this fungus spreads, like so many others, by means of both spores and mycelium; it is easy to see strands of mycelium passing from badly diseased planks or beams, &c., across intervening brickwork or soil and on to sound timber, which it then infects. The spores are developed in countless myriads from the fructifications described, and they are extremely minute and light; it has been

proved that they can be carried from house to house on the clothes and tools, &c., of workmen.*

15. Hartig proved that the spores can be carried from the wood of one building to that of another by means of the saws of workmen.†

16. Mr. McWilliam observes: "If the fungi proceed from the slime in the fissures of the earth they are generally very ramous, having round fibres shooting in every direction. If they arise from the roots of trees their first appearance is something like hoar frost, but they soon assume the mushroom shape." Hence it appears that we frequently build on spots of ground which contain the fundamental principle of the disease, and thus we are sometimes foiled in our endeavours to destroy the fungus by the admission of air. In this case the disease may be encouraged by the application of air as a remedy. When workmen are employed in buildings which contain dry-rot, and when they are working on ground which contains the symptoms of this disease their health is often affected.‡

17. In ordinary houses, where floor-cloth is laid down in the front kitchen, where there is no ventilation under the floors, and where a fire is burning every day in the stove, dry-rot often appears. In the back kitchen, where there is no floor-cloth and only an occasional fire, it rarely appears. The air is warm and stagnant under one floor and cold and stagnant under the other; at the temperature of 32 to 40 degrees the progress of dry-rot is very slow.§

18. At No. 29 Mincing Lane, London, in two out of three rooms on the first floor, upon a fire-proof floor constructed on the Fox & Barrett principle (of iron joists and concrete with yellow-pine sleepers, on strips of wood bedded in cement, to which were nailed the yellow pine floor-boards), kamptulicon was nailed down by the tenant's orders. In less than nine months the whole of the wood sleepers and strips of wood, as well as the boards, were seriously injured by dry-rot, whilst the third room floor, which had been covered with a carpet, was perfectly sound

Prevention of Dry-rot.

19. The great safeguard, beyond taking care that no spores or mycelium are present from the first, is to arrange that all the brickwork, floors, &c., be thoroughly dry before the timber is put in contact with them, or to interpose some impervious substance—a less trustworthy method. Then it is necessary to aerate and ventilate the timber, for dry timber kept dry is proof against dry-rot.¶

* H. Marshall Ward, *Timber and Some of its Diseases*, to line 11 on p. 189.

† *Ibid.* last three lines of first paragraph on p. 189.

‡ T. A. Britton, *Dry-rot in Timber*, last paragraph on p. 19 to line 12, p. 20.

§ *Ibid.* last line on p. 186 to end of first paragraph on p. 187.

¶ *Ibid.* paragraph 3 on p. 187.

¶ H. Marshall Ward, *Timber and Some of its Diseases*, paragraph 2 on p. 191.

* Rivington, *Notes on Building Construction*, paragraph 5, p. 393, from Britton.

† H. Marshall Ward, *Timber and Some of its Diseases*, last six lines on p. 184 to end of paragraph, p. 185.

‡ *Ibid.* last two lines on p. 186 to end of paragraph 3 on p. 187.

20. There can probably be no question of the advantage of creosoting the ends of rafters, beams, &c., since the creosote will act long enough to enable the timber to dry, if it is ever to dry at all.*

21. Wood must not only be dry, but be kept dry. This is impossible if the air of the chamber in which it is built is damp, as it condenses and absorbs moisture. To secure dryness, therefore, moisture must be prevented from rising from the soil by a layer of asphalt or concrete; from rising up the walls from the foundations by a damp-proof course; from soaking through the walls by building an air-drain, so that no earth is allowed to be in contact with them above the damp-proof course; unless asphalted outside or built hollow; and, lastly, by securing thorough ventilation, so that there is no corner where the air can stagnate. All vegetable soil must be removed from the site, for ammoniacal exhalations assist the germination of spores; the drains must be sound, and the mortar made of clean sand.

Salt sea sand should not be used, as it attracts moisture. The house should be well dried before the floors are laid, and kept thoroughly well ventilated. I may here point out the fallacy of burning gas for purposes of drying; for, inasmuch as water is one of the products of combustion, it has quite an opposite tendency.

Any substance or device which imprisons moisture within wood, or prevents free evaporation from its surface, or maintains a damp atmosphere in its neighbourhood, will be almost sure to develop dry-rot. It will be wise to assume that the spores are there, and are only waiting for a congenial environment to germinate.

Damp or ill-seasoned wood, therefore, should not be covered with paint or tar, nor wood partitions with wire netting and plaster of Paris. Ordinary plaster, however, seems sufficiently porous. Linoleum or kamptulicon on floors is also objectionable, and, indeed, whenever a floor has been washed and scrubbed it should be thoroughly dried before any covering whatever is laid down.

The dark, stagnant air in cellars and under the boarded floors of the ground story is very congenial to fungus growth, and it is a fallacy, very prevalent with architects and builders, that the insertion of air-bricks in the wall, below the floor level, ensures ventilation. A current of air is not at all a necessary consequence; indeed, I have heard of a case in which the fungus was found growing within the air-brick. In order to induce a current there must be difference of density between the inside and outside air. It will be well, therefore, to carry up an air-flue from the under floor-space along with the smoke-flue of the room above. The air-bricks should be so placed that there are no corners of stagnant air, and they must not be too near the

outside ground level, or they will become choked with dirt. They are often inefficient through rust, and are not infrequently closed by ignorant people.*

22. If chips of wood have been left by the carpenters lying about under the floor, they are almost sure to be infected, and are frequently the origin of an attack of dry-rot, for not only can the fungus be traced to them, but it is found growing most luxuriantly on them. So important is it to take precaution in this matter that it would be well if architects insisted in their specification on every chip being cleared away below boarded floors. Even when the ground has been covered with concrete the precaution is necessary, for the chips may become infected before the concrete is dry, and the latter is frequently fractured by the settlement of the walls.†

23. The ends of beams and joists should always be left free, and, if built into the wall, there should be a clear air-space surrounding them, which may be lined with asphalt if necessary.‡

Methods of eradicating Dry-rot.

24. Every trace of fungus should then be scraped from the timber, brickwork, or wherever it is found, and the surface of the soil, if exposed, should be removed, for it will contain spores; the whole should then be burnt without delay. If the timber is at all badly attacked it would be better to cut it out, burn it, and replace it with new.

If this cannot be done the beams should be soaked with corrosive sublimate dissolved in methyl alcohol. Methyl alcohol has great penetrating power, and acts as a vehicle to convey the corrosive sublimate into the texture of the wood, evaporating in time, and leaving the corrosive sublimate behind to do its work. The inflammable nature of methyl alcohol must not be forgotten.

Carbolic acid, or a strong solution of copper sulphate (blue vitriol) in boiling water, may be substituted. The walls and concrete floor (if any) should be washed with carbolic or sulphuric acid or Condry's fluid, and the air might be disinfected with advantage by burning sulphur.

In a slight attack the wood may be covered with hot limewash.

Notwithstanding, however, the fact that decayed wood will absorb the washes more readily than sound, these do not penetrate very deep; and as only those parts of the mycelium are killed which are in contact with the poison, the deep-seated hyphæ may remain as active as ever. The rot is not stayed, but its ravages are now hidden from view.§

* W. H. Bidlake, *Dry-rot in Timber*, last paragraph on p. 16 to end of first paragraph on p. 18.

† *Ibid.* paragraph 3, p. 18.

‡ *Ibid.* lines 3-7 in paragraph 3, p. 19.

§ *Ibid.* last three paragraphs on p. 22 and first three paragraphs on p. 23.

* H. Marshall Ward, *Timber and Some of its Diseases*, first four lines of second paragraph on p. 198.



9 CONDUIT STREET, LONDON, W., 6th June 1908.

CHRONICLE.

THE ANNUAL ELECTIONS.

The results of the elections, with the numbers polled, as reported by the Scrutineers, will be found set out in the Minutes of the Business Meeting last Monday [p. 483], when the Council and Standing Committees were declared duly elected as follows:—

THE COUNCIL.

President.—Ernest George.

Vice-Presidents.—James Sivewright Gibson; Edwin Thomas Hall; John William Simpson; Leonard Stokes.

Hon. Secretary.—Alexander Graham, F.S.A.

Members of Council.—Reginald Blomfield, A.R.A., M.A.Oxon., F.S.A.; John James Burnet, A.R.S.A. (Glasgow); Alfred William Stephens Cross, M.A.Cantab.; Edward Guy Dawber; William Flockhart; John Alfred Gotch, F.S.A. (Kettering); Edward Augustus Gruning (Past Vice-President); Henry Thomas Hare (Past Vice-President); George Hubbard, F.S.A.; Henry Vaughan Lanchester; Edwin Landseer Lutyens; Mervyn Edmund Macartney, F.S.A.; Ernest Newton; William Alfred Pite; Andrew Noble Prentice; Halsey Ralph Ricardo; John Slater, B.A.Lond.; Paul Waterhouse, M.A.Oxon.

Associate Members of Council.—Henry Arthur Crouch; William Curtis Green; Sidney Kyffin Greenslade; Stanley Hinge Hamp.

Representatives of Allied Societies.—Frederick Batchelor, A.R.H.A. (Royal Institute of the Architects of Ireland); George Bell (Glasgow Institute of Architects); Hippolyte Jean Blanc, R.S.A. (Edinburgh Architectural Association); George Thomas Brown (Northern Architectural Association); James Crocker (Devon and Exeter Architectural Society); Thomas Edgar Eccles (Liverpool Architectural Society); Mowbray Aston Green (President of Bristol Society of Architects); Arthur Ernest Heazell (Nottingham Architectural Society); Paul Ogden (Manchester Society of Architects).

Representative of the Architectural Association (London).—Walter Cave.

STANDING COMMITTEES.

Art.—*Fellows*: Robert Shekleton Balfour; Edward Guy Dawber; William Flockhart; William Adam Forsyth; James Sivewright Gibson; Henry Thomas Hare; Professor William Richard Lethaby; Edward Schroder Prior, M.A.Cantab., F.S.A.; Edwin Alfred Rickards; John William Simpson.—*Associates*: John Anderson; Arthur Thomas Bolton; Thomas Davison; Sidney Kyffin Greenslade; Walter John Tapper; Edgar Wood.

Literature.—*Fellows*: Alfred William Stephens Cross, M.A.Cantab.; John Alfred Gotch, F.S.A.; George Hubbard, F.S.A.; Edward Schroder Prior, M.A.Cantab., F.S.A.; Halsey Ralph Ricardo; Professor Frederick Moore Simpson; Professor Ravenscroft Elsey Smith; Richard Phené Spiers, F.S.A.; Hugh Stannus, A.R.C.A.; Paul Waterhouse, M.A.Oxon.—*Associates*: Frederick Chatterton; William Curtis Green; Herbert Passmore; Arthur James Stratton; William Henry Ward, M.A.Cantab.; Percy Leslie Waterhouse, M.A.Cantab.

Practice.—*Fellows*: William Henry Atkin Berry; Max Clarke; Alfred William Stephens Cross, M.A.Cantab.; George Hubbard, F.S.A.; John Murray; Sydney Perks, F.S.A.; Alfred Saxon Snell; Henry Tanner, jun.; William Henry White; William Woodward.—*Associates*: Edward Greenop; Edwin Richard Hewitt; Herbert Hardwicke Langston; Horatio Porter, M.A.Cantab.; Thomas Edward Pryce; Augustus William Tanner.

Science.—*Fellows*: Harry Percy Adams; Max Clarke; Bernard Dicksee; William Dunn; Matt. Garbutt; Francis Hooper; Charles Stanley Peach; Sydney Perks, F.S.A.; Herbert Duncan Searles-Wood; Alfred Saxon Snell.—*Associates.*—Henry William Burrows, F.G.S.; Alan Edward Munby, M.A.Cantab.; Francis Winton Newman; Digby Lewis Solomon, B.Sc.Lond.; Harry Inigo Triggs; Ernest William Malpas Wonnacott.

The Hon. Auditors are Messrs. Henry Tanner, jun. [F.], and Arthur William Sheppard [A.].

The Scrutineers of the elections were Messrs. Herbert Read (Chairman), H. Percy Adams, George Bland, Arthur Blomfield, Detmar Blow, William Grellier, Leonard Martin, H. A. Satchell, Arthur F. Usher, Herbert Wigglesworth, *Fellows*; and J. Herbert Belfrage, William H. Burt, Guy Church, C. Barry Cleveland, A. Rowland Conder, H. S. East, M. Starmer Hack, J. Stanley Heath, J. MacLaren Ross, Henry A. Saul, Herbert Shepherd, J. Myrtle Smith, *Associates*. Eight hundred voting-papers were returned, and the counting lasted from 10.30 to 6.30 on Friday the 29th ult.

The Ballot for Fellowship.

The Scrutineers appointed to examine the voting-papers and count the votes recorded for the candidates for Fellowship in the recent election met at the Institute on the 29th ult. Their report, which was delivered under seal and communicated to the Business Meeting last Monday, states that 596 voting-papers were handed to them, and that four of these were found to be invalid. The names of the candidates elected will be found set out in the Minutes of the meeting, page 484. The Scrutineers were Messrs. F. R. Farrow [F.], Chas. B. Bone [F.], C. H. Brodie [F.], Osborn C. Hills [F.], Thomas A. Pole [A.], Harold A. Woodington [A.], Frederick Chatterton [A.], A. Rowland Conder [A.], Henry James Wise [A.], H. S. East [A.], C. E. Hutchinson [A.], J. Douglas Scott [A.].

Architects and the Territorial Army.

The attention of the Council of the Royal Institute has been called to the desirability of promoting concerted action on the part of the architectural profession in the interests of the new Territorial Forces.

The success of the scheme recently sanctioned by Parliament for the training of a citizen army for national defence will depend in a large measure upon the support it receives from employers throughout the country. The voluntary expenditure of time and energy by a part of the community in the interests of the whole is in itself a sufficient burden without the added disadvantages of loss of wages and injury to material interests.

The Council venture to express the hope that the members of the architectural profession generally will combine to facilitate the service of assistants and others in the new Force. It is suggested that all who enlist in the Territorial Army should be granted one week's leave for the annual training, with full pay, in addition to any holiday which may be customary, the remainder of the period of training being taken out of the holiday.

If some such arrangement were general it would facilitate the provision of temporary assistance during the period of training. Facilities for attending drills and for rifle practice during the course of the year are also desirable in the interests of the Force and of the country generally.

L.C.C. School of Building.

The London County Council have adopted the following recommendations of their Education Committee:—

(a) That a day technical school be established at the London County Council School of Building for boys intending to enter the building trade or professions in connection therewith; that pupils be required to be between the ages of thirteen and fifteen on 31st July of the year in which they are admitted to the school, and to have passed Standard VI. or its equivalent; and that the course of instruction do cover a period of three years, and do include the technical or professional training of the pupils and the improvement of their general education.

(b) That the following fees be charged for admission of pupils to the London County Council School of Building day technical school for boys:—First year, 10s. a term, £1. 10s. a year; second and third years, artisan course, 10s. a term, £1. 10s. a year; professional course, £1. 10s. a term, £4. 10s. a year; and that where considered desirable by the Education Committee pupils whose parents are in receipt of less than £160 a year be admitted free.

(c) That the undermentioned teachers be employed in connection with the day technical school to be established at the London County Council School of Building (Brixton) for boys intending to enter the building or allied trades, at the rates of pay respectively specified:—Whole-time assistant to principal, £250 a year, rising by six annual increments of £15 and one of £10 to £350 a year; whole-time assistant teacher of general subjects, £150 a year, rising by annual increments of £10

to £250 a year; whole-time teacher of art subjects, £150 a year, rising by annual increments of £10 to £200 a year; whole-time teacher of carpentry, £150 a year, rising by annual increments of £10 to £200 a year; part-time teacher of brickwork, £35 a year; part-time teacher of masonry, £35 a year.

Crosby Hall.

The London County Council have adopted the following recommendation of the Local Government Committee:—"That the Council do consent to accept the ownership of the fabric of Crosby Hall, provided that the building be re-erected on land adjoining More House, Chelsea, the freehold of which will be presented to the Council, that the interests of the Council be safeguarded to its satisfaction, that no charge fall upon the county rate in respect of the acquisition, re-erection, and maintenance of the building, and that arrangements be made for public access thereto; and that it be referred to the Local Government, Records, and Museums Committee to prepare and submit to the Council at an early date a complete scheme."

The late Julien Guadet.

At the General Meeting last Monday the Hon. Secretary, Mr. Alexander Graham, formally announced to the Institute the decease of M. Julien Guadet, the distinguished Professor of the École des Beaux-Arts, Paris, whose election as Hon. Corresponding Member R.I.B.A. was to have taken place that evening.

M. Guadet, who was born in 1834, was descended from the Girondist deputy of that name who perished on the scaffold in 1794. He entered the École des Beaux-Arts in 1853, and was one of its most brilliant students, carrying off the Medals for Mathematics, Perspective, and Construction, the Grande Médaille d'Émulation, and finally, in 1864, the Grand Prix de Rome. In 1871 he was appointed Professor at the École des Beaux-Arts, and succeeded M. Constant Dufeux in the direction of an atelier which, during his twenty-three years as "Patron," turned out pupil after pupil to achieve subsequent distinction among French architects. In 1894, at the urgent request of the Council of the École, he reluctantly gave up his atelier to take over the Professorship of Theory of Architecture, then vacant by the death of Edmond Guillaume. He held the Professorship with rare distinction and devotion until his death. He was a strenuous worker, and found time amid his exacting professorial duties to produce the five volumes of his great work on the *Elements and Theory of Architecture*, now universally recognised as a standard authority and text-book. His principal architectural works were the new Hôtel des Postes in the Rue du Louvre, Paris, and the reconstruction of the Théâtre Français after the fire. M. Guadet

was a member of the Conseil Supérieur of the École des Beaux-Arts, Member of the Conseil Supérieur of the Department of Public Instruction, Inspector-General of Civil Buildings and National Palaces, "Officier" in the Legion of Honour, and at the time of his death was President of the Central Society of French Architects.

On the motion of the Hon. Secretary the Meeting resolved that the regrets of the Institute for the loss it had sustained by the death of M. Guadet be entered on the Minutes of the Meeting, and that a letter expressing the sympathy and condolence of members be addressed to the widow and family of their late distinguished *confrère*.

The Church of Saint-Séverin, Paris.

New York, U.S.A., 23rd May 1908.

To the Editor JOURNAL R.I.B.A.,—

SIR,—I have read a report in an American newspaper that the interesting church of Saint-Séverin, in an old quarter of Paris, is about to be demolished in the course of municipal improvements.

Surely so regrettable a project must meet with great opposition from the many antiquarian societies of Paris. It is contrary to the spirit of that Government which has lately shown its regard for historical monuments, and provided for their preservation. I believe there have been cases abroad which have been deemed important enough for a protest from the R.I.B.A. and other English societies, notably the case of the old Ponte Vecchia, Florence, some time ago; and I would suggest that this church affords another.

If it be for a new street, or widening an old one, the building surely might be left upon an island, as in the case of our own Strand churches, and the road carried round half on each side, to the advantage of its appearance. It would be interesting if the Comte de Lasteyrie or some other Corresponding Member of the Institute would procure a plan of the scheme that necessitates such an idea, together with some account of the protests made, for publication in the Journal.

The loss of this church, or that of its older neighbour, St. Julian le Pauvre, would be irreparable. The building is well illustrated in Lenoir's great work *Statistique Monumentale de Paris*, and in Hessling's *Le vieux Paris*. Its west tower and three adjoining bays are of the fourteenth century, and the eastern bays and chevet Flamboyant. Its height, and seven-span width, vaulting, elaborate gablets over the side chapels on the flank elevation, its extended gargoyles, etc., make it one of the best-known and most interesting churches for study.

A record, and especially some notice of the absolute necessity for destruction, would be valuable, if it be in reality doomed beyond appeal.—I am, Sir, yours faithfully,

EDWARD W. HUDSON [A.].

Mr. Hudson encloses a cutting from the *New York Times* of a few weeks back consisting of a note from its Paris correspondent lamenting the demolition which threatens some of the few remaining historic relics of old Paris. "For some years," he says, "the hand of the renovator has been stayed at that most ancient island in the Seine, the Ile de la Cité, on which looms Notre-Dame, facing the Hôtel Dieu, the old barracks, and the Palais de Justice, and grovels the Morgue, that fatal building of gruesome mysteries. Now, however, in order to prolong the Rue Saint-Jacques, the old Hôtel Dieu is being taken down, together with the Church of Saint-Séverin, the little mediæval houses in the Rue du Petit-Pont, and, worst of all, that famous Gothic tower near Notre-Dame in the Rue Chanoinesse, with its spiral staircase known as the Tour du Roi Dagobert. Thus is disappearing, almost at one fell swoop, the Quartier Gariaude, formerly one of the curiosities of the capital, both for its historical associations and the unbounded artistry of certain of its buildings, among which, of course, first stands the beautiful Saint-Séverin, which dates from 1060."

THE VIIITH INTERNATIONAL CONGRESS OF ARCHITECTS, VIENNA.

THE Eighth International Congress must be counted among the most successful of its kind. The attendance of members—between thirteen and fourteen hundred—was unusually large; the Papers touched international points of extreme importance, and the social arrangements were elaborate and hospitable. When a mass of people such as constitute an international congress, whether it be of architects or of men of any other art or profession, are brought together under conditions which as regards language and customs are unfamiliar to many, it is difficult, perhaps impossible, to devise an organisation which will give complete satisfaction to everybody. But the Executive Committee at Vienna, under the presidency of Herr Otto Wagner, with Baron Krauss as Secretary, not only arranged a programme of unusual interest and amplitude, but on the whole carried it through with exactitude and thoroughness. The final and abiding impression of the Congress is that Austrian architects hold not only a high position in the estimation of the public, but also in the estimation of the Sovereign, the Government, and the city.

The opening meeting was held in the splendid chamber of the Houses of Parliament, a banquet was given by the Lord Mayor and Corporation in the Town Hall, and in the name and at the invitation of the Emperor a reception was given at the Palace, where in the presence of the diplomatic body the leading representatives of each country—Mr. Leonard Stokes and Mr. J. W. Simpson acting for England—were presented by Herr Otto

Wagner to the Archduke Ferdinand. Apart from these special distinctions the Society of Artists at Vienna gave a reception in their galleries, and the Austrian Society of Engineers and Architects an evening *fête* on the heights of the Kahlenberg. The doors of the Opera and Burg Theatre were thrown open to a limited number of guests on two evenings; and admission was granted to several private palaces, both in Vienna and in the country, where the members were in most cases received by the noble proprietor, who, after pointing out objects of interest, hospitably entertained his visitors. Special attention was also paid to the entertainment of the lady members of the Congress (of whom there were a large number), the most delightful and picturesque being the children's *fête* to celebrate the Kaiser's Jubilee at Schönbrunn Palace. Finally there was the Farewell Banquet on the Saturday evening at the Hôtel Continental (not so well attended as the similar banquet in London), at which Mr. Leonard Stokes, speaking on behalf of the English members, gave expression to the general sense of pleasure and instruction which had been derived from the events of the past week.

A feature of the Congress was the International Architectural Exhibition in the Gartenbau-Gesellschaft, a commodious building divided into several galleries, each country being allotted its own Saal. England was represented almost entirely by photographs of domestic work. The accommodation allowed for the English exhibit was, I think, of about the same cubic space as that allotted to France. In this connection it may, however, be as well to remember that at the last Congress the large rooms of the Grafton Galleries were devoted solely to English work, and that a larger exhibition at Vienna would have necessarily included much of the work exhibited on that occasion. In addition to the architectural drawings, the furniture and fittings of a room in a Sanatorium built by Baron Krauss, and rooms in other buildings by Professor Josef Hoffmann—probably the most advanced exponent of *l'art nouveau*—were reproduced. The Exhibition, which remains open for a month, also contains specimens of Austrian arts and crafts and decorative sculpture.

The subjects of the Papers were not so numerous as at the last Congress. Professor Mayreder's "Comparison of the Berlin, London, Paris, Rome and Vienna Building Regulations" led him to the conclusion that London was behindhand with regard to town planning. Professor Dolezal advocated the photometric survey of architectural monuments, stating that in Germany this method had been found of the greatest use. M. Harmand, in supporting Dr. Erös's Paper on the copyright of the architect, expressed surprise that English architects appeared to be ignorant of the fact that certain old English laws protected the architect's work. Among other subjects discussed, referred from the last Congress,

were the Regulation of the Cultivation of Art by the State (to use the phrasing of the official documents), the Conservation of Public Architectural Monuments, the Regulation of Architectural Competitions and "Concrete Iron Buildings." With regard to the Regulation of the Cultivation of Art by the State the Comité Permanent had prepared the following Resolution:—

"That every Government be urgently requested to establish a Secretary of State, or at least a suitable Department, for the Fine Arts; that prominent artists should be associated with these departments, and that, as architecture must be regarded as the leading fine art, architects should be in the majority; that such Secretaries or Departments should undertake work for the promotion and care of the fine arts in all their branches."

Herr Bodo Ebhardt, who has recently presented to the Institute Library his works on the ancient castles of Germany, read a Paper on the Building of Towns in Germany in the Middle Ages and its importance for the present.

But, interesting as were the entertainments provided by the Executive Committee, and interesting and instructive as were the Papers, certainly not the least interesting and least instructive feature of the Congress was the great city in which it was held. From a modern point of view probably no capital possesses greater architectural interest than Vienna. There we have the past—a Gothic past—followed by the period of the Renaissance, and later by the baroque style; then, after an intermediate period in which French influences seem to prevail, we have a strong classical note; and, finally, we have *l'art nouveau*! Together with these phases of architecture we find schemes of garden planning—take the grounds of the Belvedere and Schwarzenburg Palaces, for instance—or later work in the Volksgarten and Stadtpark, all of the greatest interest and beauty. During the last fifty years the obliteration of the fortifications and ramparts which surrounded the old city prepared the way for one of the noblest schemes of town planning of modern times. The Emperor, the sixtieth anniversary of whose reign is being celebrated this month, supported these schemes with all his influence and energy, as well as financially, calling to his aid the ablest architects of his time and country. He has lived to see the practical completion of his plans, which are alike a monument to him and to those who have helped him to carry them into effect. The Viennese are proud of their splendid city, and the recent Congress sufficiently indicated that they not only delight to honour the men to whose artistic taste and capacity they owe so much, but also their *confrères* from other countries.

RUDOLF DIRCKS.

THE LATE J. J. STEVENSON, F.S.A.

JOHN JAMES STEVENSON was born in Glasgow in 1831, educated first at the grammar school in that city, and afterwards at Glasgow University, where he took the degree of M.A. With the view of entering the Scotch Church he next studied in the Theological College at Edinburgh and afterwards for one summer at Tübingen. But architecture was always his desire—confirmed and strengthened by a visit to Italy which took place about that time. He therefore became a pupil of David Bryce, R.S.A., of Edinburgh in 1856, and two years afterwards got further training in London in the office of Sir Gilbert Scott. Here he had as contemporaries Crossland, Bodley, Edgar, Bignell, Garner, Medland, R. J. Johnson, Micklethwaite, E. R. Robson, T. G. Jackson, R.A., and Gilbert Scott the younger. On leaving Scott's he went for a sketching tour in France with his friend Johnson, and after this settled down to practice, taking up a partnership with Mr. Campbell Douglas in Glasgow which lasted nine years.

He came to London in 1869, joined Mr. E. R. Robson, who had just been appointed architect to the then newly formed School Board, and was responsible for the architecture of some of the earliest of the London Board schools, selecting and adapting for these a type of brick architecture which afterwards became known as "Queen Anne." This style has proved so suitable for its purpose that the designers of the public elementary schools of to-day have not found it necessary to make much change (except perhaps in the direction of dropping the "Queen Anne" details) in the treatment of brickwork which he then introduced.

It was at this period that he built for himself "The Red House," Bayswater Hill, a well-known and very early example of this style of brick architecture. It may be interesting to state that the interior and decoration of his library were designed by his friend Bodley, Stevenson holding the view that—as he was wont to express it—"a man really cannot always be sitting and looking at his own work."

For many years his home on Bayswater Hill was a centre of literary and artistic life. Among those who frequently met there we may mention at random Isaac Taylor, John MacLennan, George Macdonald, Canon Ainger, Pettie, Macwhirter, Sir W. Q. Orchardson, Napier Henry, Sir Alexander Moncrieff, Professor Middleton, the Rev. W. J. Loftie, Professor Robertson Smith, and William Morris, his friendship with the last named being the means by which he became intimately associated with the Society for the Protection of Ancient Buildings. He was a member of the original Committee of that Society, and never ceased to take an active interest in its work: for he held strong views on matters connected

with old buildings, and detested all attempts to tamper with their history under the guise of "restoration." A long list of works stands to his credit, some of the more important being Churches at Monzie (1880), Crieff (1881), Perth (1883), Fairlie—enlargement (1894), Stirling and Glasgow (1900). Of country houses, &c., we may name Westoe, South Shields (1868), Munstead, Godalming (1878), Churchfield, Falmouth (1889), School at Fairlie (1880), Offices for the Tyne Commissioners, Newcastle (1882), Oatlands Mere, Weybridge (1893), tutors' and other private houses at Oxford and Cambridge, and several houses in the neighbourhood of Camberley. Amongst his London buildings were houses in Prince's Gate and Lowther Gardens (1878), and a house and studio in Melbury Road for Colin Hunter (1878); houses in Kensington Court (1881), group of seventeen houses in Buckingham Palace Road (1892), group of five houses in South Street (1897), with others in Hampstead, Belgravia, and Kensington Palace Gardens. Also shipping offices in Fenchurch Avenue and the Board schools of which mention has been made.

His University work comprises repairs at St. John's (1889) and Oriel College (1899), Oxford, a block of sets and lecture-rooms at Christ's College, Cambridge (1886), with additions in 1906; the Morphological Laboratory for the University of Oxford (1899), and the University Chemical Laboratory at Cambridge (1889), with additions now being built. He also made designs for additions to Sidney Sussex, Trinity, and Clare Colleges, and for the Sedgwick Geological Museum at Cambridge. He was the first architect to design the interior decoration of the principal rooms in a large steamship, and did this in several instances for the Orient Company, notably in the case of the ships *Orient*, *Ormuz*, *Austral*, *Ophir*, *Omrah*, and *Orontes*.

Stevenson published in 1880 a book entitled *House Architecture*, which has had a great vogue, especially amongst those of the younger generation. He was the author of many essays and papers read before the professional societies, especially one on a proposed restoration of the mausoleum at Halicarnassos—a subject in which he was keenly interested, and to which towards the close of his life he gave considerable time and thought. The last letter he drafted was one to Professor Lethaby, asking him to discuss the arguments advanced on the Professor's recent pamphlet on that subject.

Of J. J. Stevenson's personal character the writers can speak with no uncertain voice. His office was familiarly known among Scottish draughtsmen as "the stepping-stone to London." His kindness to his assistants and his consideration for their welfare were quite extraordinary, and his extensive library was always at their disposal. Of the many men who passed through his office

in the course of years none are likely ever to forget him nor the help they received at his hands. Modest and unassuming, kindly and generous, he leaves a gap which will not soon be filled.

F. W. TROUP [F.].

HARRY REDFERN [F.].

* * In 1896 Mr. Stevenson took into partnership Mr. Harry Redfern, and after that date all his work was carried out in conjunction with his junior partner.

LEGAL.

Architects' Fees.

HUNT V. ACTON URBAN DISTRICT COUNCIL.

This was an action brought by Mr. William George Hunt to recover £800 for professional services rendered to the defendants. The defendants denied liability, and further pleaded that they had already paid to the plaintiff the sum of £2,427 in full satisfaction of his claims.

The case came on in the King's Bench Division before Mr. Justice Lawrance, sitting by consent without a jury, and lasted three days, May 19-21. Mr. Horace Ivory, K.C., and Mr. Frank Newbolt, appeared for the plaintiff; Mr. Macmorran, K.C., and Mr. E. J. Naldrett for the defendants. The case is fully reported in the professional Press. The following report is from *The Times* of the 22nd May:—

The short facts of the case were as follows. The plaintiff, in 1903, was invited to submit plans for the erection of new municipal buildings by the defendants. The conditions of tender, which were under seal, provided that the architect should be paid for his services in accordance with the Scale of Charges issued by the Royal Institute of British Architects. The plaintiff accepted the conditions and submitted plans which were approved by the defendants. The proposed plans were in respect of buildings to cost £85,000. The Local Government Board objected to the cost, and refused to allow the Council to borrow the necessary money. The Council then proposed to the plaintiff that the plans should be so altered as to make them suitable for buildings which were to cost only £35,000. The plaintiff altered the plans accordingly. The plaintiff's case was that he was entitled to be paid, in addition to the fees already paid him for the original design, 2½ per cent. upon £35,000, the cost of the proposed new building.

Mr. Macmorran, for the defendants, submitted that the sealing of the conditions amounted to nothing, and the Council did not bind themselves to employ the successful competitor. There was no contract to employ plaintiff upon the conditions. A surcharge was made against the Council for paying the plaintiff upon account, because there was no sealed contract, which showed that there was no binding contract. In September 1906 the plaintiff agreed to accept a sum in full discharge for all services rendered by him. The plans were practically new plans. There was a separate scheme with regard to the £35,000. There never was a sealed contract in respect of that separate scheme. The plaintiff never was appointed architect to the Council. He was not an officer of the Council in any sense at all. There was no evidence of any such appointment.

Mr. Horace Ivory argued that the conditions amounted to a contract to employ the successful competitor as architect, or to appoint him as such. In the alternative they amounted to an appointment of the six selected competitors to prepare designs, on terms that they should be paid £50 in any event, and the selected architect was to be paid, in addition, a sum according to the Scale. From

the date plaintiff's design was accepted he was treated as if appointed. His appointment was continuous right up to April 1907. The Minutes of the Council of February 1906 showed that the scheme was continuous. If the sealed contract applied to the original scheme, then it applied to the revised scheme with additions and alterations (*Williams v. Barmouth Urban District Council*, 77 L.T., 383). The plaintiff was an officer of the Council appointed under section 189 of the Local Government Act, 1894. There was nothing in the Act to say that the appointment must be under seal. The plaintiff was throughout treated as if he had been appointed. The evidence of plaintiff and his witnesses was that the charge of 2½ per cent. was based upon the principle that the alterations were of such a character that they involved doing all the work over again, and therefore he ought to be so remunerated in proportion to the time occupied on the drawings.

Mr. Justice Lawrance, in giving judgment, said the question turned upon whether the scheme was new, or whether it was a modification of the original scheme. In his judgment the £85,000 scheme was not approved by the Local Government Board because a great deal too much money was going to be spent. Then the Council decided to spend £35,000, and the architect was asked to prepare his plans with regard to that, and the question was whether he was acting under a new scheme, or was it part of the original? In his (the learned Judge's) judgment it was a modification of the original plans, forced upon the plaintiff by the Council themselves. The contract for the original scheme being under seal, the plaintiff was entitled to recover. It was said that the auditor of the Local Government Board had surcharged the amount paid to the plaintiff because the contract was not under seal. That might be, but it did not alter the matter. The plaintiff's claim came under the principle laid down in *Williams v. Barmouth Urban District Council* (*supra*), that all was done by the plaintiff under a power conferred on him as architect in pursuance of a contract which was under seal.

The learned Judge entered judgment for the plaintiff for £800 with costs. Stay of execution was granted upon payment being made of £400 into Court within ten days.

MINUTES. XV.

At the Fifteenth General Meeting (Business) of the Session 1907-08, held Monday, 1st June 1908, at 8 p.m.—Present: Mr. Edwin T. Hall, *Vice-President*, in the Chair, 27 Fellows (including nine members of the Council), and 32 Associates (including one member of the Council)—the Minutes of the Meeting held 18th May 1908 [p. 396] were taken as read and signed as correct.

The following Fellow attending for the first time since his election was formally admitted by the Chairman—viz. Ewen Harper (Birmingham).

The Hon. Secretary having referred to recent additions to the Library, a vote of thanks was passed to the various donors by acclamation.

The Secretary announced the results of the polling for the election of the Council and Standing Committees for the official year 1908-9, as reported by the Scrutineers, viz.:

PRESIDENT.—Ernest George [*unopposed*].

VICE-PRESIDENTS.—James S. Gibson, Edwin T. Hall, John W. Simpson, Leonard Stokes [*unopposed*].

HONORARY SECRETARY.—Alexander Graham [*unopposed*].

MEMBERS OF COUNCIL (18).

Elected: H. T. Hare, 592 votes; E. G. Dawber, 582 R. Blomfield, A.R.A., 554; E. Newton, 524; M. E.

Macartney, 510; H. V. Lanchester, 493; A. N. Prentice, 479; J. J. Burnet, 472; P. Waterhouse, 463; J. A. Gotch, 456; J. Slater, 443; H. R. Ricardo, 430; A. W. S. Cross, 430; E. L. Lutyens, 426; E. A. Gruning, 419; W. Flockhart, 411; W. A. Pite, 404; G. Hubbard, 393.

Not elected: G. Horsley, 381; G. H. F. Prynne, 361; C. E. Mallows, 358; S. P. Pick, 324; W. Woodward, 320; T. Moore, 305; W. Dunn, 279; M. B. Adams, 272; E. Wimperis, 252; W. H. A. Berry, 233; W. A. Forsyth, 230; H. P. Burke Downing, 210; A. R. Jemmett, 143; B. T. Kitchen, 125; W. G. Wilson, 110.

ASSOCIATE MEMBERS OF COUNCIL (4).

Elected: Sidney Kyffin Greenslade, 431 votes; William Curtis Green, 408; Henry Arthur Crouch, 352; Stanley Hinge Hamp, 332.

Not elected: Septimus Warwick, 249 votes; Walter John Tapper, 246; Clyde Francis Young, 237; Herbert Winkler Wills, 221; Kensington Gammell, 113; Frederick Chatterton, 112.

REPRESENTATIVES OF ALLIED SOCIETIES (9).

Elected: H. J. Blane (Edinburgh), 578 votes; T. E. Eccles (Liverpool), 578; Paul Ogden (Manchester), 569; Fredk. Batchelor (Ireland), 562; M. A. Green (Bristol), 531; A. E. Heazell (Nottingham), 490; Geo. Bell (Glasgow), 472; G. T. Brown (Northern), 468; Jas. Crocker (Devon and Exeter), 466.

Not elected: P. Robinson (Leeds and Yorks), 458; W. C. Fenton (Sheffield), 441; E. H. Fawckner (Cardiff), 349; J. D. Mills (Dundee), 235.

HON. AUDITORS.

Henry Tanner, jun., *Fellow*; Arthur William Sheppard, *Associate* [*unopposed*].

ART STANDING COMMITTEE.

Fellows (10).—*Elected:* E. Gny Dawber, 647 votes; J. S. Gibson, 625; H. T. Hare, 617; Prof. W. R. Lethaby, 604; J. W. Simpson, 594; W. Flockhart, 580; E. S. Prior, 576; R. S. Balfour, 553; W. A. Forsyth, 551; E. A. Rickards, 543.

Not elected: Paul Waterhouse, 530; S. S. Reay, 232.

Associates (6).—*Elected:* S. K. Greenslade, 583; T. Davison, 508; A. T. Bolton, 494; J. Anderson, 455; W. J. Tapper, 444; E. Wood, 419.

Not elected: S. Warwick, 416; S. H. Hamp, 408.

LITERATURE STANDING COMMITTEE.

Fellows (10).—*Elected:* R. P. Spiers, 629 votes; F. M. Simpson, 568; J. A. Gotch, 567; E. S. Prior, 540; H. Stannus, 537; H. Ricardo, 532; P. Waterhouse, 516; A. W. S. Cross, 515; G. Hubbard, 473; R. E. Smith, 472.

Not elected: G. H. F. Prynne, 443; C. H. Townsend, 423; H. C. Corlette, 389; H. A. Satchell, 210.

Associates (6).—*Elected:* W. H. Ward, 593; W. Curtis Green, 588; P. L. Waterhouse, 562; H. Passmore, 485; A. J. Stratton, 479; F. Chatterton, 374.

Not elected: F. Lishman, 334; C. E. Sayer, 328.

PRACTICE STANDING COMMITTEE.

Fellows (10).—*Elected:* A. S. Snell, 453; A. W. S. Cross, 432; G. Hubbard, 431; W. Woodward, 411; Max Clarke, 381; Sydney Perks, 371; W. H. A. Berry, 370; H. Tanner, jun., 368; John Murray, 333; W. H. White, 333.

Not elected: T. H. Watson, 328; W. E. Riley, 300; J. D. Matthews, 284; E. Flint, 264; R. S. Ayling, 237; H. A. Satchell, 233; W. C. Waymouth, 229; G. E. Nield, 205; W. G. Wilson, 195; H. P. Monckton, 159.

Associates (6).—*Elected:* H. Porter, 470; T. E. Pryce, 403; E. R. Hewitt, 399; A. W. Tanner, 375; E. Greenop, 364; H. H. Langston, 342.

Not elected: E. G. Page, 305; R. S. Wilkinson, 301; F. Chatterton, 258; K. Gammell, 202; E. A. Jollye, 186.

SCIENCE STANDING COMMITTEE.

Fellows (10).—*Elected:* H. D. Searles-Wood, 579 votes; H. P. Adams, 537; Max Clarke, 529; A. S. Snell, 494; S. Perks, 490; M. Garbutt, 484; W. Dunn, 479; C. S. Peach, 455; F. Hooper, 453; B. Dicksee, 432.

Not elected: T. W. Aldwinckle, 403; Lewis Solomon, 380; W. E. V. Crompton, 356; A. W. Moore, 325.

Associates (6).—*Elected:* A. E. Munby, 376 votes; H. W. Burrows, 364; D. L. Solomon, 361; H. I. Triggs, 355; W. Wonnacott, 344; F. W. Newman, 318.

Not elected: L. Angell, 277; E. A. Young, 268; E. R. Hewitt, 226; E. J. Bennett, 197; C. A. Daubney, 193; W. Jacques, 143; C. L. Gill, 126; J. H. Markham, 118; F. R. Hiorns, 110.

The Chairman declared the Officers, Council, and Committees duly elected in accordance with the foregoing Report.

The Secretary read the Scrutineers' Report announcing the election of the following candidates:—

AS FELLOWS (6).

JOHN BROOKE [A.].

ALFRED MORRIS BUTLER [A.].

FREDERICK ERNEST PEARCE EDWARDS [A.].

FRANK MINSHULL ELGOOD [A.].

GEORGE McLEAN FORD [A.].

ERNEST AUGUSTUS RUNTZ [Qualified for Assoc. 1889].

The following candidates were elected by show of hands under By-law 9, viz.:—

AS ASSOCIATES (3).

JOHN JACKSON BECK [Probationer 1901, Student 1904, Qualified 1907], Toronto.

SAMUEL BUTTERY BIRDS [R.I.B.A. Colonial Examination 1907], Toronto.

HARRY JOHN VENNING [Special Examination 1907].

AS HON. ASSOCIATE.

GERALD EDWARD MOIRA, Professor of Painting at the Royal College of Art, South Kensington.

The Hon. Secretary having announced the decease of M. Julien Guadet, the eminent Professor at the École des Beaux-Arts, Paris, whose election as Hon. Corresponding Member was to have taken place that evening, the Meeting resolved that the regrets of the Institute for the loss it had sustained by the death of M. Guadet be entered on the Minutes of the Meeting, and that a letter expressing the sympathy and condolence of members be addressed to the widow and family of their late distinguished *confrère*.

On the motion of the Chairman, a vote of thanks was passed by acclamation to the Scrutineers for their services in connection with the elections which had been announced that evening.

The Chairman, before closing the proceedings, asked the support of members for the Concert to be given on the 3rd June, which had been organised by the T-Square Club on behalf of the funds of the Architects' Benevolent Society; and having referred to the Annual Dinner to be held on the 23rd June, expressed the hope that a large gathering of members would be present to do honour to the distinguished guests expected on the occasion.

The proceedings terminated at 8.45 p.m.

